

THE POVERTY-GROWTH-INEQUALITY TRIANGLE: WITH SOME REFLECTIONS ON EGYPT

François Bourguignon

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Contents

FOREWORD

No economic issue has deservedly received more attention in the development literature than the relationship between economic growth, income distribution, and more recently poverty reduction. Yet, nowhere is the discussion of this relationship clearer and more novel than in the paper presented here by François Bourguignon. The central argument he makes is that the reduction of absolute poverty requires strong, country-specific combinations of growth and distribution policies.

Although the argument is simple and appealing, it is a significant departure from conventional views. Bourguignon argues that the focus on the links between economic growth and poverty on one hand, and income distribution and poverty on the other is all but misleading. To alleviate absolute poverty, the relevant focus should be on the interaction between growth and distribution, which policymakers can influence significantly. By implication, economic growth and distribution are not on a collision course and Kuznets' hypothesis is pronounced dead.

Building on the above ideas, Mr. Bourguignon also explores some of the implications for Egypt. When he made his presentation at ECES, the audience reacted with a very rich set of comments and questions, covering issues such as the impact of taxation, subsidies, credit allocation, and asset redistribution on both growth and equality. A summary of these questions and responses are given at the end of this publication. I have no doubt that the reader will find both the paper and questions and answers thought provoking, if not ground breaking. It is my hope that the ideas contained herein will find their way into an effective poverty reduction strategy in Egypt.

Ahmed Galal
Executive Director, ECES
March, 2005

ABOUT THE SPEAKER

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François Bourguignon is currently chief economist and senior vice president for Development Economics at the World Bank. He is internationally recognized as an intellectual leader in the economics of public policy, inequality, economic growth, income distribution and development. He also has extensive practical experience of the World Bank and its interactions with developing countries and other partners.

Bourguignon was previously director of the Bank's Development Research Group, a part of the Development Economics Vice Presidency, and managing editor of the World Bank Economic Review. He has served as an advisor to many developing countries, the OECD, the United Nations, the European Commission, and was a member of the Council of Economic Advisors to the French Prime Minister. Since 1985 he has been professor of economics at the Ecole des Hautes Etudes en Sciences Sociales in Paris, where he founded and directed the Département et Laboratoire d'Economie Théorique et Appliquée (DELTA), a research unit in theoretical and applied economics. He has held academic positions with the University of Chile, Santiago, and the University of Toronto. He is also a fellow of the Econometric Society.

A French national, Bourguignon has authored or edited several books, including his most recent, *The Impact of Economic Policies on Poverty and Income Distribution – Evaluation Techniques and Tools*. He is also the author of over one hundred articles in leading international economics journals, as well as dozens of working papers.

PART I

THE POVERTY-GROWTH-INEQUALITY TRIANGLE: WITH SOME REFLECTIONS ON EGYPT[*]

INTRODUCTION

A recurring issue in discussions on development is whether the main focus of development strategies should be placed on growth, or poverty, and/or on inequality. This paper argues that this way of formulating the question of development goals poses a false dilemma. Rather, the answer can be simply expressed in two statements: first, the rapid elimination of *absolute* poverty, under all forms, is a meaningful goal for development. Second, achieving the goal of rapidly reducing absolute poverty requires strong, country-specific *combinations* of growth and distribution policies.

These two statements raise conceptual, measurement, theoretical and empirical issues, such as clarifying the distinction between absolute and relative poverty. Absolute poverty is defined in reference to a poverty line that has a fixed purchasing power determined so as to cover needs that are physically and socially essential. Setting absolute poverty reduction as the prime development goal is simply saying that a fundamental objective of development is to ensure everybody satisfies their basic needs. The poverty line may be multi-dimensional, incorporating both an income poverty line for needs that can be met monetarily, and non-monetary lines for other needs. Absolute poverty lines need not be the same across countries, even after correcting for purchasing power parity for income poverty, as basic needs are bound to differ across societies. Nor do they need to remain fixed over time, as basic needs are likely to evolve.

[*] Earlier versions of this paper were presented at the Indian Council for Research on International Economic Relations, New Delhi, on February 4, 2004, and at Princeton University for a panel discussion at the Institute for International and Regional Studies "State of the World" Conference, on February 13, 2004. It is a modified version of a paper of the same title originally presented in Paris on November 13, 2003 at the conference on "Poverty, Inequality and Growth" sponsored by the Agence Française de Développement and the EU Development Network. The author would like to thank Jean-Jacques Dethier, Shahrokh Fardoust, Mark Sundberg and Xubei Luo for their contribution to the preparation of this lecture, and Ahmed Galal, Professors Heba El-Laithy and Karima Korayem, and Farrukh Iqbal for their very useful comments.

This absolute definition of poverty, in use in many countries, must be contrasted with a relative definition of poverty, where the poverty line is established not in terms of some well-defined basic needs, but as a fixed proportion of some income standard in the population, for example the mean or median income. The European Union considers as poor those whose economic resources are below 50 percent of the mean income in member countries. What matters for the purpose of this paper is that such a relative definition of poverty – sometimes referred to as 'relative deprivation' – becomes in some sense independent of growth. The absolute level of income and therefore a large part of the development process does not matter anymore with such a definition. Only relative incomes, or pure distributional features matter. Fixing the poverty line relative to average income can show rising poverty even when the standard of living of the poor has in fact risen. There is increasing consensus among economists that relative deprivation matters, but there does not seem to be a consensus that individual welfare depends only on one's relative position, and not at all on absolute standard of living as determined by incomes.[1]

Once it is accepted that the reduction of absolute income poverty is a meaningful development goal, then a direct link may be established between development, growth and distribution. An arithmetic *identity* links the growth of the mean income in a given population, with the change in distribution– or in 'relative' incomes– and the reduction of absolute poverty. In other words, poverty reduction in a given country and at a given point of time is fully determined by the rate of growth of the mean income of the population and the change in the distribution of income. As illustrated in Figure 1, a development strategy is thus fully determined by the rate of growth and distributional changes in the population.

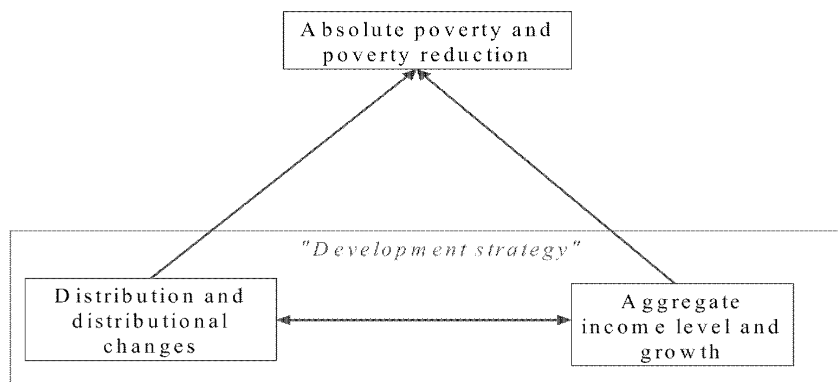
Formally, the relationships implicit behind the PGI triangle are less simple. For instance, the elasticity of poverty with respect to growth for a constant distribution turns out not to be constant across countries with different development levels and distribution, and across the various ways

[1] Note that it is also possible to define poverty as some combination of the absolute and relative definitions. On this see Foster (1998), Atkinson and Bourguignon (2000) and Ravallion (2003a).

of measuring poverty. This also applies to the elasticity of poverty with respect to inequality indicators.

The real challenge to establishing a development strategy for reducing poverty lies in the interactions between distribution and growth, and not in the relationship between poverty and growth on one hand and poverty and inequality on the other, which are essentially arithmetic. There is little controversy among economists that growth is essential for (income) poverty reduction under the assumption that the distribution of income remains more or less constant. In fact, a great deal of evidence points in this direction (see Deininger and Squire 1996; Dollar and Kraay 2002; Ravallion 2002; and Bourguignon 2003). Likewise, much evidence suggests that worsening distribution tends to increase poverty. Yet, the real issue in establishing a development strategy is whether growth and distribution are independent of each other, or are strongly interrelated. Does faster growth tend to reduce inequality or to increase it? Does high inequality in a given country act to slow or to accelerate growth?

Figure 1. The Poverty-Growth-Inequality Triangle



Several recently published micro-economic based case studies indicate clearly that the relationship between distribution and growth is at once strong and complex. This is in contrast to the large number of cross-country regressions which find no significant relationship between growth and inequality, and are mostly inconclusive regarding the effects of inequality on growth. Hence, one cannot conclude simplistically that ‘growth is good for the poor,’ whatever its nature,

although it is difficult to conceive of direct micro-economic evidence that would identify the growth-distribution relationship with precision.

This paper seeks to clarify the debate about growth vs. distribution development strategies by providing a rigorous analysis of the relationships that exist among the three vertices of the PGI triangle. Section 1 discusses the simple arithmetic of poverty, inequality and growth. Section 2 briefly examines the two-way relationship between growth and distribution. Section 3 discusses the scope for, and the role of, redistributive policies. Finally, the paper concludes by emphasizing the importance of growth and distribution for poverty reduction and synthesizing the reflections on Egypt.

SECTION 1. THE SIMPLE ARITHMETIC OF POVERTY, INEQUALITY AND GROWTH

A change in the distribution of income can be decomposed into two effects. First, there is the effect of a proportional change in all incomes that leaves the distribution of relative income unchanged, i.e. a growth effect. Second, there is the effect of a change in the distribution of relative incomes which, by definition, is independent of the mean, i.e. a distributional effect.[2]

The following definitions help to clarify these linkages:

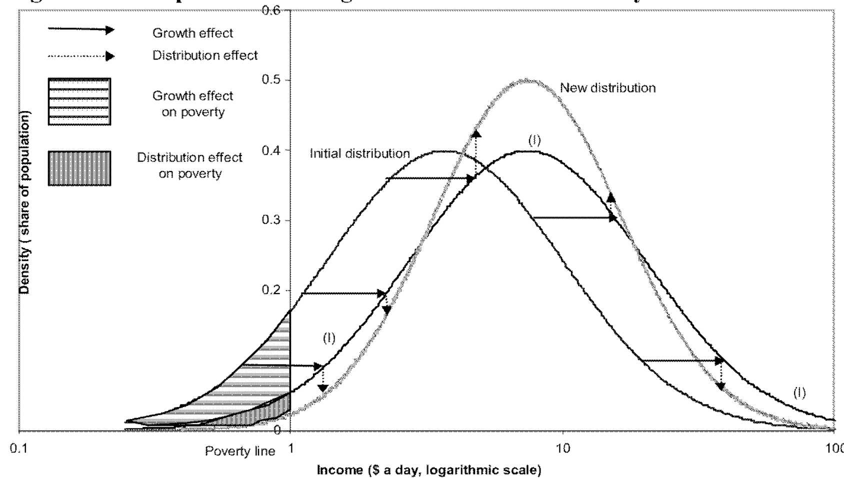
- "Poverty" is measured by the absolute poverty headcount index, i.e., the proportion of the population below a particular *poverty line* (e.g. $1 a day) as derived from household survey data.
- "Inequality" (or "distribution") refers to disparities in *relative income* across the whole population, i.e., disparities in income after normalizing all observations by the population mean so as to make them independent of the scale of incomes.
- "Growth" is the percentage change in mean welfare level (e.g. income or consumption) in the household survey.

[2] This decomposition has been discussed in detail in Datt and Ravallion (1992), Kakwani (1993). See also Fields (2001) and Bourguignon (2003).

A change in poverty can then be shown to be a function of growth, distribution and the change in distribution. This is illustrated in Figure 2, where the poverty headcount is simply the area under the density curve at the left of the poverty line (here set at $1 a day). This figure shows the density of the distribution of income, that is the number of individuals at each level of income represented on a logarithmic scale on the horizontal axis. The move from the initial to the new distribution goes through an intermediate step, which is the horizontal translation of the initial density curve to curve (I). Because of the logarithmic scale on the horizontal axis, this change corresponds to the same proportional increase of all incomes in the population and thus stands for the pure 'growth effect' with no change taking place in the distribution of relative incomes. Then, moving from curve (I) to the new distribution curve occurs at constant mean income. This movement thus corresponds to the change in the distribution of 'relative' income, or the 'distribution' effect.

Of course, there is some path dependence in that decomposition. Instead of moving first rightwards and then up and down as in the figure, it would have been possible to move first up and down and then to move rightwards. Presumably, these two paths are not necessarily equivalent except for infinitesimal changes. This is an issue that shall be ignored here, assuming in effect that all changes are sufficiently small for path dependence not to be a problem.

Figure 2. Decomposition of Change in Distribution and Poverty into Growth and Distributional Effects



For sufficiently small changes in mean income and in the distribution, the preceding decomposition corresponds to an identity which expresses the change in poverty as a function of the growth in mean income and changes in the distribution of relative income.

Change in Poverty ≡ F(growth, distribution, change in distribution)

A formal statement of that identity – i.e. the expression of function F( ) – is offered in Bourguignon (2003), under the assumption that the distribution function is lognormal, which is a standard approximation of empirical distributions in the applied literature. It is shown there that both the growth and the inequality elasticity of poverty are increasing functions of the level of development and decreasing functions of the degree of relative income inequality. It also shows how the decomposition identity may be applied to observed growth periods for which distribution data are available at the beginning and end of the period.

This discussion shows clearly that both growth and inequality changes play a major role in generating changes in poverty. However, the impact of these phenomena will depend on the initial level of income and inequality. Moreover, the relative effects of both phenomena may differ quite dramatically across countries.

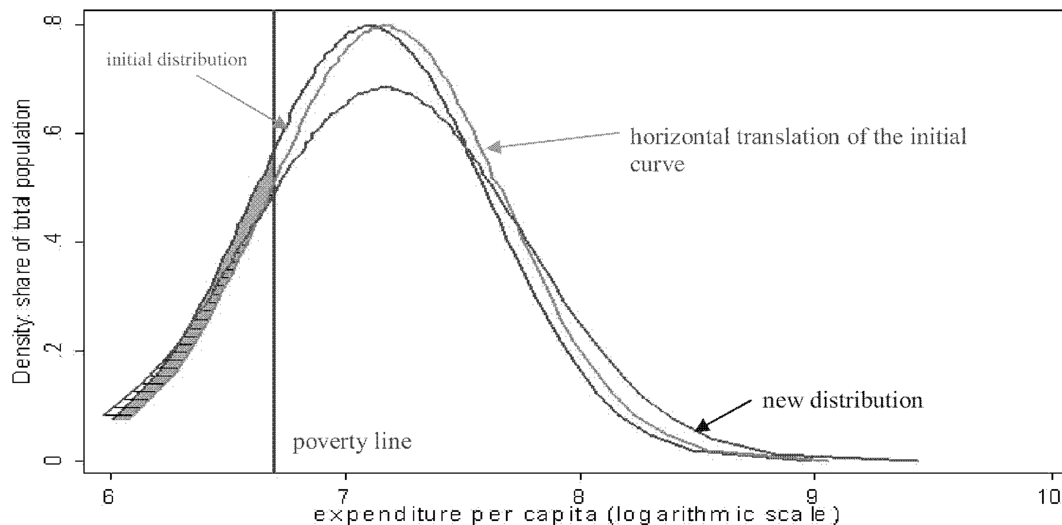
As an illustration of the preceding argument, consider the case of Egypt. The two most recent household surveys (1995/1996 and 1999/2000) show some clear trends in growth, inequality and poverty reduction. Over this five year period, poverty has fallen as average household incomes (expenditures) have grown. However, worsening income distribution has undermined the poverty- reducing impact of growth.

Egypt's poverty headcount ratio declined in the latter half of the 1990s from 19.4 percent of the population to 16.7 percent due to a relatively strong growth performance (GDP growth averaged 5.2 percent).[3] Over this same period, income distribution worsened, with the Gini index rising from 34.5 to 37.8 in 1999/2000. While Egypt's income distribution is less unequal than many other middle-income countries, this is a sharp increase in inequality over a five year

[3] International poverty lines used by the World Bank of expenditures below $1/day and $2/day (PPP adjusted) indicate 1.7 million and 25.9 million people, respectively, were poor in 1999/2000 (El-Laithy, Lokshin, and Banerji 2003).

period. Figure 3 shows these trends for Egypt over this period.[4] While growth has reduced poverty by the shaded area (represented by the area to the left of the poverty line between the initial distribution curve and the horizontal shift of the initial distribution curve), worsening distribution has eroded these potential gains (represented by the area with lines between the flatter new distribution curve and the horizontal translation of the initial curve). Poverty reduction would have been far greater had the distribution not been more unequal.

Figure 3. Growth and Distributional Effects on Poverty in Egypt, 1996-2000



Source: Based on CAPMAS HIECS 1995/96, 1999/2000.
Note: Assuming that the distribution of the expenditure per capita is lognormal.

The urban-rural differences are also striking. During the period of 1996-2000, the average annual growth rate of urban Egypt was 5.5 percent, while that of rural Egypt was -0.1 percent.[5] The growth effects on poverty reduction are positive in urban Egypt, while slightly negative in rural Egypt. Both urban and rural Egypt have suffered a trend towards worsening distribution,

[4] This is an approximation based on decile distribution data and assuming a lognormal distribution of expenditures.
[5] The widening gap in private consumption spending between urban and rural households during the 1990s is also found in Korayem (2002).

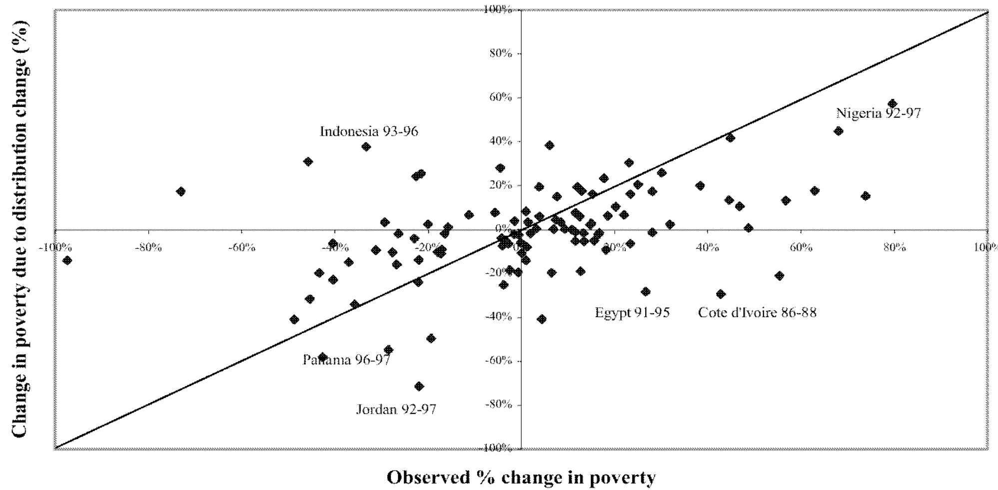
although this varies by region.[6] The unequalizing distributional change mitigates the positive effects of growth on poverty reduction in urban Egypt, while it accentuates poverty in rural Egypt.

Applying the identity discussed above, it is a rather simple matter to identify what share of the observed change in poverty is due to growth – under the assumption of a constant distribution of relative income – and what is due to changes in the distribution of relative income. Figure 4 shows an actual sample of growth spells where changes in mean income per capita – or consumption depending on the data source – and in the distribution of relative income are observed. It shows the contribution of distributional changes to the observed percentage change in poverty for the various growth spells in the data base. As actual poverty changes are on the horizontal axis, the distance between a point in that graph and the first bisector measures the distribution of the effect of growth on poverty changes. Thus, points above the bisector correspond to spells where growth was positive and contributed to a decline in poverty, whereas points below the bisector correspond to spells with negative growth.

The striking fact in Figure 4 is the importance of the distribution-related change in poverty. Of course, it is not the mean change which matters here – in effect it is arbitrarily set to zero in the identification of the distribution effect – but the dispersion of that change. Observation of Figure 4 suggests that variations of the poverty headcount larger than 20 percent, in absolute value, over a few years are quite common. Indeed, about 30 percent of the observations in Figure 4 are in that range, and about twice that proportion show distribution-related changes in poverty larger than 10 percent.

[6] See Annex A for analysis at the regional level.

Figure 4. Distribution-Related Poverty Change in a Sample of Growth Spells (%)



It follows from this simple exercise that *distribution matters* for poverty reduction. Over the medium-run, distributional changes may be responsible for sizable changes in poverty. In some instances, these changes may even offset the favorable effects of growth. In Ethiopia, for example, growth could have reduced the poverty headcount by some 31 percent from 1982-95. Yet, because of changes in distribution that contributed to a 37 percent *increase* in poverty, the final effect has been a net increase in poverty of 6 percent. The case of Indonesia between 1996 and 1999 is the opposite. There, distributional changes compensated for the adverse effect of growth on poverty.

Table 1 summarizes the growth and distributional changes of this sample of growth spells with their change in poverty levels. Among the 63 spells that witnessed a decline in poverty, 52 (or 83 percent) had a positive growth, and 41 (or 65 percent) had a pro-poor change in distribution. Among the 33 spells that had positive growth and pro-poor distribution change, 31 (or 94 percent) had a reduction in poverty; while among the 19 spells that had negative growth and worsening distribution change, only 1 (or 5 percent) had a reduction in poverty. It suggests that poverty reduction mainly occurs in economies where there is positive economic growth as well as pro-poor distribution change.

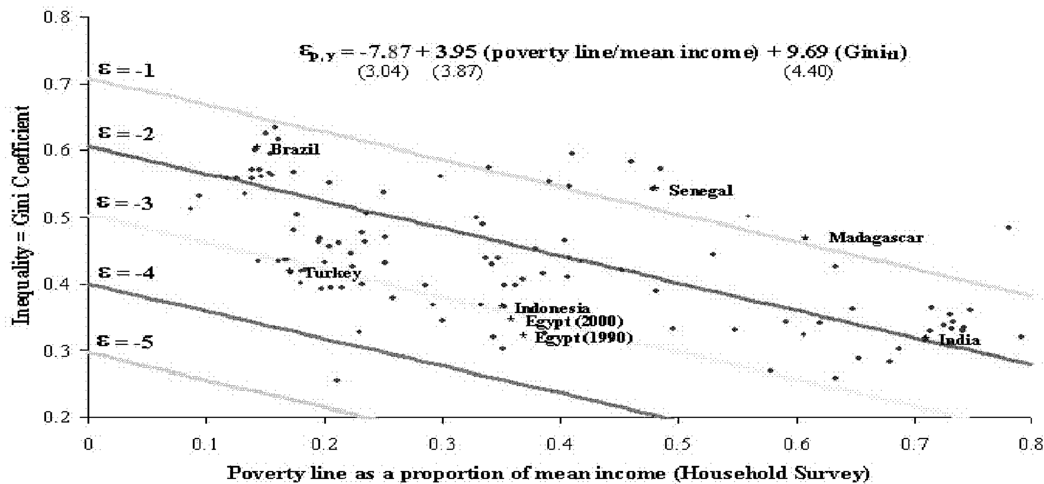
Table 1. Sample of Growth Spells with Their Change in Poverty Levels

	Positive Income Growth	Negative Income Growth	Total
Increasing Gini	+ 13 / — 21	+ 18 / — 1	+ 31 / — 22
Decreasing Gini	+ 2 / — 31	+ 18 / — 10	+ 20 / — 41
Total	+ 15 / — 52	+ 36 / — 11	+ 51 / — 63

Note: Numbers represent growth spells; shaded areas indicate a decline in poverty headcount during the growth spell.

The effect of growth on poverty reduction is conditioned on the development and inequality levels. Figure 5 shows that the growth elasticity of poverty (in absolute level) is positively correlated to the mean income, and negatively correlated with the Gini level.

Figure 5. Poverty Headcount/Growth Elasticity as a Function of Mean Income and Income inequality

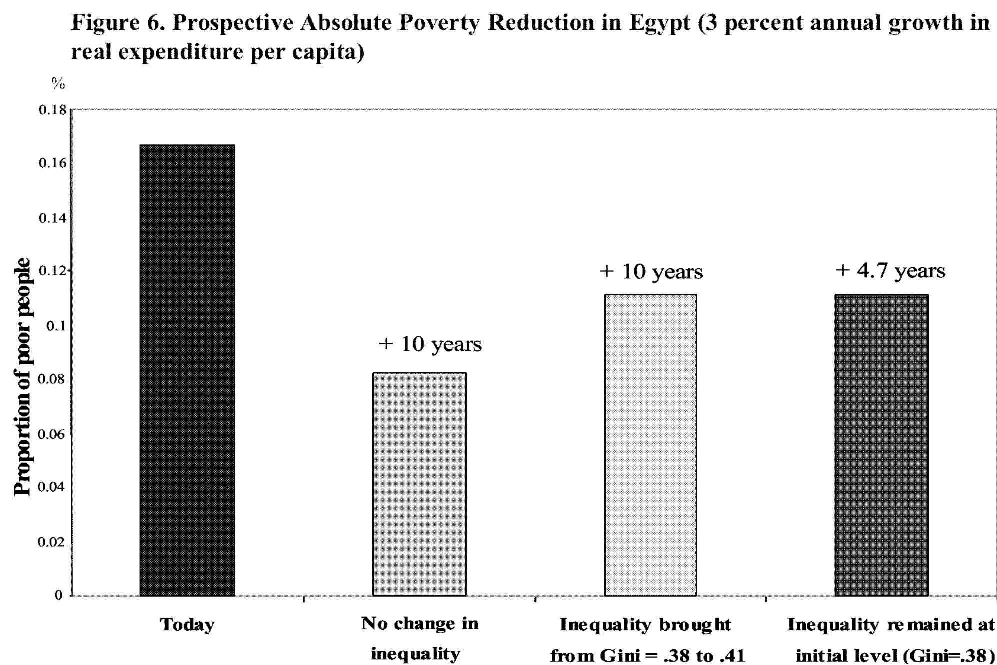


Source: Bourguignon (2004).

Note: $\varepsilon_{p,y}$ = the elasticity of poverty with respect to income. T-statistics are included in parentheses in the regression equation.

In Figure 6 a hypothetical experiment is made on the basis of a lognormal distribution of relative income calibrated on Egyptian data. Poverty currently affects around 17 percent of the population in Egypt. Suppose that from now on, real income per capita grows at the annual rate of 3 percent and no change takes place in the distribution. A simple application of the identity linking poverty reduction and growth shows that, given the degree of inequality prevailing in Egypt, poverty would be reduced by a little more than half over 10 years to around 8 percent. Suppose that during these 10 years inequality increases by roughly the same amount as it did over the five years from 1996 to 2000 (a rise in the Gini coefficient from 38 to 41). In this case, poverty would only decline to 11 percent– around 3 percentage points higher for the same growth rate. Without worsening distribution, this same poverty level could be achieved in 4.7 years (the last bar of Figure 6) as in 10 years with worsening distribution. In other words, 5.3 years of growth effect on poverty reduction would have essentially been 'lost.'

Figure 6. Prospective Absolute Poverty Reduction in Egypt (3 percent annual growth in real expenditure per capita)



What can be concluded from these simple exercises? First, it is important to consider growth and income distribution *simultaneously,* and to recognize that income distribution matters as much as growth for poverty reduction. Of course, one can object to these examples as necessarily referring to a limited time period. It is difficult to imagine that inequality will increase or decrease for very long periods of time since there are likely to be limits to the level of inequality for political economy reasons. In this sense, long-run growth is the main factor for poverty reduction and as such is 'good for the poor'. However, development and poverty reduction goals have specific time horizons. The examples above show that inequality does change over time and that poverty reduction over a specific period may be endangered by adverse changes in distribution.

A second lesson to be drawn from the previous examples is that country specificity matters a great deal. The first two bars in Figure 6 show that the same growth rate causes different percentage changes in poverty in the two hypothetical countries. The growth elasticity of poverty is higher in the case of the middle-income country. Theory and evidence show that both the growth and distribution elasticity of poverty depend positively on the level of development and negatively on the degree of inequality, as noted above. Optimal growth-distribution strategies aiming at poverty reduction in a given time frame should therefore differ depending on initial conditions. For instance, it is likely that changing the distribution is probably more important for middle-income and inegalitarian countries, while growth is probably more important, in relative terms, for low-income and egalitarian countries. Also, the preceding point suggests that effective redistributive policies may in fact yield a double dividend: they reduce poverty today and accelerate poverty reduction in the future.

Knowledge of that identity linking poverty reduction, growth and distribution is certainly not sufficient to establish the optimal mix of growth and distribution-oriented policies in a development strategy. It is also essential to know the relative cost of achieving progress on each front. Moreover, it is also fundamental to know what interactions there may be between the two types of policies. In the preceding examples combining growth and inequality reduction, a central issue is whether a 3 percent annual growth rate in a given country may be obtained

independently of the distribution of income, or whether such a growth rate is likely to cause changes in the distribution. Likewise, one may question whether the distributional changes considered in Table 1 and Figure 5 may impact negatively, or positively, on the rate of growth. This relationship between growth and distribution is discussed next.

SECTION 2. TWO-WAY RELATIONSHIP BETWEEN GROWTH AND DISTRIBUTION

This section focuses on the two-way relationship between growth and distribution. We know that economic growth modifies the structure of the economy and therefore may potentially affect the distribution of income and welfare. But is there any systematic pattern in that evolution? Does the initial level of inequality affect the rate of economic growth in a systematic way? If so, would progressive redistribution policies likely accelerate or slow down growth? The lessons from the literature on these questions, and possible implications for development strategies and redistribution policies, are briefly summarized below.

A. Effects of Growth on Distribution

There are many channels through which economic growth may modify the distribution of income and welfare, and much effort has been devoted to formalizing the corresponding economic mechanisms. In the process of development, economic growth modifies the distribution of resources across sectors, relative prices, factor rewards (such as labor, physical capital, human capital and land), and the factor endowments of agents. These changes are likely to directly impact the distribution of income, regardless of whether factor and goods markets are perfect or not. In effect, ever since Kuznets and Lewis the theoretical constructs about the effect of growth on the distribution of income focused on one or several of these basic mechanisms. Labor market imperfections and productivity differentials across sectors with changing importance in the economy were the main theoretical explanation of Kuznets' celebrated inverted-U curve relating inequality and development almost 50 years ago. Individual accumulation behavior and subsequent aggregate changes in factor rewards due to the falling marginal product of capital explained the same evolution in Stiglitz' (1969) neoclassical model of growth and distribution. Since then, many other channels based directly or indirectly on these

basic mechanisms– the 'segmentation' of the economy and changes in prices and factor rewards– have been uncovered, which do not always lead to the inverted-U effect of growth on inequality.

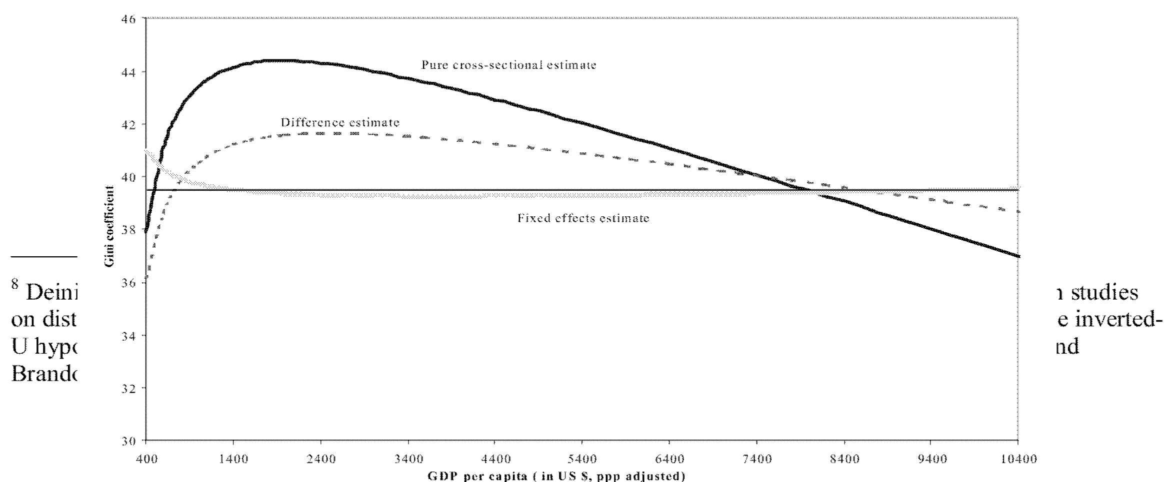
Institutional change is also closely linked with the process of economic growth in the sense that growth tends to modify institutions, social relations, culture, etc. Various hypotheses have been made regarding how this process takes place. The simplest mechanism is through non-homothetic preferences. As income grows, the demand for social services changes. For instance, people become politically more active, as in Gradstein and Justman (1999), and change the distribution of political power and the evolution of institutions. Within the influential framework proposed by North (1990), it may also be held that transaction costs, which may prevent institutional changes, become increasingly affordable with economic growth. More directly, it may also be observed that the process of urbanization that accompanies development comes naturally with an evolution of social relations in the population, for instance a greater perceived need for coordination.

Taken together, do these various effects of growth on the structure of society, drawn from economic theory, lead to a clear evolution in the distribution of resources? Has the inverted-U curve that Kuznets identified, regarding the historical evolution of inequality across countries and explained by the sectoral reallocation of the population in the development process, become a universal principle? Or is development and the evolution of distribution country-specific? This question dominated the debate on development during the 1970s and the beginning of the 1980s. There was a period during which it seemed that the inverted-U hypothesis was verified across countries at different levels of development — see in particular Paukert (1973), Chenery and his collaborators, including Ahluwalia (see e.g. Ahluwalia 1976 and Ahluwalia, Carter, and Chenery 1976). As more and better data became available, however it appeared that this empirical relationship, while perhaps valid across countries in the 1970s, did not fit the subsequent evolution of inequality observed in a sample of countries.[7]

[7] Using an unbalanced panel of data in developing countries, Bourguignon and Morrisson (2002) show that the inverted-U hypothesis was probably valid in the 1970s but not in later periods as additional countries were added to the original sample.

The best illustration of this is provided by a thorough analysis of the database on distribution assembled by Deininger and Squire (1996).[8] Figure 7 summarizes the results they obtained. Data come from an unbalanced panel, with several observations for each country at approximately 10 year intervals. When all the observations are pooled together and a simple regression of the Gini coefficient over income per capita and the inverse of income per capita is run, then a clear inverted-U curve is obtained. However, the curvature loses significance when the estimation is made on decadal differences for each country in the sample, that is to say when only time changes are taken into account. In effect, one can see in Figure 7 that the maximum difference in the Gini coefficient across development levels is now 2 percentage points at most, when it was approximately 5 percentage points before. Finally, when fixed country effects are introduced in the original estimate, so that all countries are assumed to follow parallel paths rather than the same path, then the inverted-U shape disappears. In effect, the curve becomes practically flat, and even the decline in inequality for low incomes fails to be statistically significant.

Figure 7. Cross-Country Estimates of the Kuznets Curve



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Source: Deininger and Squire (1996).

These results certainly do not imply that growth has no significant impact on distribution. Rather they indicate that there is too much country specificity in the way growth affects distribution for any generalization to be possible. Indeed, case studies, as opposed to cross-sectional studies, show that distributional changes have very much to do with the pace and structural features of economic growth in the period under analysis. Even in cases where no apparent change in distribution has taken place, growth has in general tended to counteract long-run socio-demographic trends in inequality. The case of Brazil is a good illustration of this point. According to a study by Ferreira and Paes de Barros (1998), inequality did not change between 1976 and 1996, whereas mean income per capita increased overall by a few percentage points. Prima facie, this suggests that sluggish growth in Brazil had no impact on income distribution. Deeper analysis shows, however, that there were some socio-demographic forces that should have contributed to a drop in inequality during that period, this being the case in particular of the drop in fertility and average family size among poor people as well as progress achieved in education. From this evidence, it might be inferred that slow growth was indeed responsible for an increase in inequality that offset the effect of those equalizing socio-demographic forces. In effect, a more detailed analysis shows that a major factor towards more inequality was the difficulty faced by the poorest households in entering the labor market, an obvious consequence of slow growth.[9]

[9] For more case studies of this type see Bourguignon, Ferreira, and Lustig (2003) as well as the general discussion in Bourguignon (2004).

More case studies of the preceding type are certainly needed to deepen our understanding of the distributional consequences of growth – or stagnation. The country specificity of that relationship is encouraging in two respects. First, from an analytical point of view, it may mean that the various channels identified by economic theory for the effect of growth on distribution are indeed valid, but their relevance depends on the initial conditions. If so, it is hoped that further detailed case studies will serve to check the effectiveness of these channels. Second, from a policy point of view country specificity may also mean that there is ample room for policy intervention in determining the distributional consequences of growth. A number of development strategies involving different "mixes" of growth and distribution have been proposed in the last three decades, e.g. redistribution with growth, pro-poor growth, etc. (see Bourguignon 1998; Rodrik 2003). It may be the case that some countries have deliberately chosen a particular strategy, or that one strategy was easier to implement than another given initial conditions. The important point is that even if growth may have some automatic effects on distribution through different channels, the importance of these channels can likely be modified by policy choices. Put more directly, redistribution undertaken alongside the development process may help modify potentially adverse primary distributional effects of growth.

B. Effects of Inequality on the Rate of Growth

The preceding discussion is only one side of the relationship between growth and distribution. The other side is that leading from inequality to growth. The dominant view today is that inequality is not a final outcome of growth but plays a central role in determining the rate and pattern of growth. This line of enquiry was pioneered by Galor and Zeira (1993), soon followed by the empirical papers of Persson and Tabellini (1994) and Alesina and Rodrik (1994) who were the first to point out that initial inequality seemed to be empirically associated with lower growth rates.

This literature has proposed several hypotheses which could explain why progressive redistribution may be growth-enhancing. First, credit market imperfections may explain that redistributing capital from capital-rich enterprises or individuals to capital-poor and credit-

constrained people increases efficiency, investment and growth. Second, political economy arguments have been proposed. Too much inequality in a redistributive democracy leads to more redistribution and less capital accumulation. Alternatively, too much inequality may lead to social tension expressed through collectively organized or individually-led violent redistribution. Other hypotheses (such as economies of scale in goods markets) have also been put forward in the literature. These various hypotheses are briefly discussed below.

Credit market imperfections

Broadly speaking, these hypotheses predict a negative correlation between *wealth* inequality and economic growth based on a very simple mechanism. If rich individuals in a society have access to a credit market with an annual rate of interest of 10 percent, while the poorest face a 50 percent interest rate for lack of collateral, all projects with a rate of return 10 percent or higher will be undertaken by individuals in the first group. But in the second group, only projects with a 50 percent rate of return or higher will go forward. Projects with rates of return just below 50 percent – and above 10 percent – would be forgone by members of that group. However, if some wealth were redistributed from the first to the second group, poorer individuals would have less need to borrow and could undertake projects promising a rate of return slightly below 50 percent. In this case, redistribution from rich to poor would actually generate more investment, and/or a higher rate of return on capital.

This argument, adapted from Piketty (1993), can be applied to several situations. The key point is that poor people cannot borrow as they lack collateral, face imperfect credit markets, or their poverty prevents them from seizing investment opportunities that would benefit both themselves and society. For example, poor people cannot offer their children a good education, cannot obtain loans to start a business, or cannot afford insurance, however profitable their enterprises may be. Countries with a high poverty headcount, or an unequal distribution of wealth, thus underutilize their productive and growth potential to a greater degree than countries with fewer poor people or with a more equitable distribution.

Formalized versions of this argument are found in the models of Galor and Zeira (1993), Banerjee and Newman (1993), Aghion and Bolton (1997), and others. In these models, credit is rationed because of asymmetric information. This affects the ability of poor people, and possibly of the middle class, to freely choose occupations or investments, thus influencing the evolution of inequality and output. Some models (e.g. Banerjee and Newman 1993; Galor and Zeira 1993) assume that indefinite accumulation of wealth is not possible so that the "poverty trap" persists over the long run. By contrast, if there is no exclusion, inefficiencies are temporary. People will save and their wealth will increase over time. Sooner or later they will be free of the credit constraint, because they will all have sufficient collateral to be entrepreneurs or to send their kids to secondary school and college if they so wish (Ray 1998).

These models have nothing to say about how high inequality comes about historically in the first place, but they do suggest that a history of high inequality may persist indefinitely, carrying with it inefficiencies in production and slower growth. The same economy would exhibit different rates of growth if it were possible to redistribute wealth at no cost.

Redistribution in a democratic context

A second strand of literature predicts a positive correlation between inequality and average tax rates. It is through this channel that early empirical studies (e.g. Persson and Tabellini 1994; Alesina and Rodrik 1994) attempted to explain why greater inequality leads to lower growth. When political rights to vote are extended to the majority of the population, the amount of redistribution is decided by the median voter and this determines directly or indirectly the rate of growth of the economy. The hypothesis of these models is that, first, more unequal societies generate more redistribution than more egalitarian ones, and second, that redistribution diminishes incentives to invest and slows economic growth because of the distortionary effects of taxation (disincentives to exert effort or to save).

It turns out that existing evidence on taxation does not support the hypothesis that tax rates are higher in high-inequality countries. Perotti (1996) even shows that the effect of the fiscal system in many high-inequality countries is actually regressive. A possible explanation of this

apparent contradiction between theory and evidence is that, because of heterogeneous political weights, the 'decisive' or 'pivotal' voter may not be the 'median voter' even in countries which officially are democracies. If the 'decisive' voter has an income larger than the mean income, he/she will be in favor of a regressive distribution.[10] Under these conditions, it is important to know the extent to which the inequality of the distribution of resources in a society determines, at the same time, the nature of the public decision process and the identity of the 'decisive' voter.[11]

Redistribution through social conflict

Social conflict and political instability are other channels which may relate inequality to efficiency or growth. Alesina and Perotti (1996) argue that inequality can lead to less political stability, and this in turn can lead to sub-optimal investment levels. Rodrik (1998) finds that countries that experienced the sharpest drops in growth after 1975 were those with divided societies and with weak institutions, and this cripples the ability of their political systems to respond effectively to external shocks. Violence levels, as measured by recorded homicide rates, have recently increased sharply in the two most unequal regions in the world (Latin America and sub-Saharan Africa), and in regions where growth has been the fastest (Eastern Europe, Russia and Central Asia). Bourguignon (1999) and others have documented the growing importance of the social and economic burden imposed on society by this rising violence, both in terms of the direct costs in lives and medical resources, and in terms of the opportunity costs of (both public and private) resources diverted from other activities towards preventing and fighting crime.

Other theoretical arguments may be called upon to justify a negative relationship between the distribution of resources, economic efficiency and growth. One of them, which extends an argument developed in the 1970s, is based on the presence of economies of scale in some consumption goods, which could not be exploited if inequality reduced the demand for these goods (see Schleifer, Vishny, and Murphy 1989). But not all theoretical arguments go in the

[10] This argument is developed in Benabou (1996).

[11] A new class of models is obtained by endogenizing the 'decisive' voter. See, for instance, Acemoğlu and Robinson 1996; Ades and Verdier 1996; Robinson 1998; Bourguignon and Verdier 2000; and Verdier and Bourguignon 2000.

same direction. Indeed, the old Kaldorian argument that redistributing from rich to poor runs the risk of reducing the aggregate savings rate in the economy may certainly not be rejected on *a priori* grounds.

Tentative empirical verifications through "growth regressions," with inequality variables on the right hand side, have yielded ambiguous or even contradictory results. Initial results based on pure cross-sections seemed to suggest that indeed more inegalitarian countries tended to grow more slowly over the last 20 to 30 years. But very similar problems arose as with the Kuznets curve. First, this result depended very much on the sample and the inequality data being used. Second, it turned out to be strongly influenced by country fixed effects. For instance, controlling for regions was sufficient to make inequality insignificant (see Deininger and Squire 1998). Of course, fixed effects models were also estimated on the basis of decadal country data on growth and initial inequality (Forbes 2000; Li and Zou 1998). However, the corresponding estimates then showed a positive association between inequality and growth, as with the Kaldorian argument. Overall, it is thus fair to say that available aggregate evidence is inconclusive.

It is also fair to say that panel data regressions, which may supposedly take care of fixed effect biases, ask too much from the data. To see this, it must be noted that it is not because inequality in year t is taken to explain growth between years t and t+10 that inequality may be considered as 'exogenous'. Some common unobserved determinants may actually be behind the two observations, and no convincing instrument may be available to correct for the resulting endogeneity bias.[12] Being able to identify the effect of inequality on growth would thus require relying on truly exogenous innovations in the inequality variables. But when and where did such an 'exogenous' change in inequality ever occur?

There are two ways out of this inconclusiveness of aggregate cross-country analysis. The first consists of trying to estimate 'structural' models of the inequality-growth relationship, including the analysis of some formalization of the various hypotheses reviewed above on the

[12] In this respect, it is not clear that lagged values of both inequality and growth used in GMM system estimates are valid instruments. They may also be influenced by the same unobserved variables as contemporaneous inequality and growth.

distributional consequences of growth. This is a rather formidable task, and it is not clear that all the data necessary for such an ambitious analysis are available at present.

The second strategy is to check whether the micro-economic mechanisms behind the preceding hypotheses are verified or not, and then derive from this some rough estimate of the likely aggregate effect on growth of various types of redistribution. Concerning the credit market imperfection hypothesis, for instance, it would be sufficient to identify the difference between the marginal product of capital, possibly human capital, in the poorest segments of society, say in the informal sector, and in the rest of the economy. Some simple calculations should then permit getting an order of magnitude of the inefficiency of the economy due to the credit market imperfection and how much potential gain there may be in getting rid of that imperfection through wealth redistribution. This is probably the only way to confirm the theoretical assumption that too much inequality is harmful to growth, and tends to perpetuate itself.

SECTION 3. THE SCOPE FOR REDISTRIBUTION IN DEVELOPMENT

What does this imply for policy or, more precisely, for redistribution policy? At face value, these arguments would lead to progressive redistribution of income over some time period which accelerates poverty reduction for given patterns and rates of growth, thereby yielding positive results. If one interprets literally the potentially negative relationship between inequality and growth, then this redistribution policy would enhance growth. It would then be sufficient to have at one's disposal policy instruments to guarantee that growth is pro-poor – i.e. that it reduces inequality – for a virtuous circle to start and lead progressively to faster growth, declining inequality and accelerated poverty reduction.

Until recently, this was the interpretation given to the idea that indeed equality could be favorable to growth. "Reduce inequality through redistribution or through promoting 'pro-poor' growth and sustainable growth would settle." Unfortunately, this is not at all what can be drawn from the arguments invoked to justify that inequality is harmful to growth. The argument and its implications are slightly more subtle and it is worth bearing them clearly in mind.

The arguments summarized above tend to suggest that redistribution of 'wealth' from rich to less-rich people may have a positive impact on growth. This may occur by correcting credit market imperfections that would otherwise prevent some productive investments from taking place, by lowering the tax rate, or by freeing other distortionary income redistribution mechanisms. The important point here is that it is redistribution of *wealth,* not of income, that may produce this favorable effect on economic efficiency and growth. In fact, income transfers that are not lump-sum would have exactly the opposite effect on growth. By lowering the expected return from acquiring physical and human capital, they might distort the economy and reduce saving and investment, and therefore the rate of growth. In order to be efficient and growth-enhancing, redistribution should be concerned with wealth rather than current income or consumption expenditures.

It is doubtful that such direct wealth redistribution is feasible or without cost. Redistributing property can only be done under exceptional circumstances, which often involve political violence, and can hardly be considered economic policy options. Land reform is a case in point. Today, few programs would actually involve authoritarian land redistribution. Instead they are generally based on subsidized transactions in the land market. Typically, land is being bought from large landowners at what is thought to be the market price. It is then sold to landless peasants or smallholders with some kind of subsidized credit scheme. Overall, the whole operation is somewhere between a wealth and an income transfer. Taxes that are levied to finance credit subsidies are generally on the whole population and typically constitute an income transfer with obvious distortionary effects. The credit subsidy part clearly contributes to wealth accumulation among poor peasants.[13]

More generally, it must be realized that there is a paradox in the theoretical arguments which show that wealth redistribution, but not income redistribution, enhances economic efficiency and growth. This is because redistributing wealth generally involves some non-lump sum income transfers, which may have negative effects on efficiency and growth. In the long run, the positive wealth effect may be stronger than the negative income effect. This is likely to depend mostly on

[13] For a comprehensive analysis of land reforms see World Bank (2003).

the relative importance of the wealth accumulation part of the redistribution policy being considered. In fact, even pure income transfers generally have some spillover effects on wealth accumulation. This issue is addressed by the recent use of so-called ‘smart transfers’ (see below).

Are pure income transfers really so bad? It is true that until recently conventional wisdom emphasized the negative effects of income transfers due to their adverse incentive effects on the supply of labor and the savings of transfer beneficiaries and tax payers. These effects are reinforced by the natural leakage of benefits to non-target groups. As discussed by Ravallion (2003b), this conventional wisdom is now being questioned, partly as a result of the studies reviewed above and partly because new empirical findings have emerged.

To the extent that beneficiaries may improve their standard of living – their nutrition could improve for example – income transfers may contribute to the accumulation of human capital among them. Under these conditions, apparently ‘pure’ income transfers in effect lead to some particular wealth accumulation among the poor.

Another channel through which income transfers may affect the assets owned by poor people is through insurance. Indeed, many economists now consider that in the presence of a high and possibly increasing macro-economic volatility, targeted transfers can be useful instruments for “social protection”. They may also contribute to pro-poor growth (i.e. growth that reduces poverty) by avoiding dis-savings, for instance by taking children out of school or by helping credit-constrained poor people to be productive workers or take up productive opportunities for self-employment.

Strong arguments can also be made in favor of “smart transfers” such as Mexico’s Progresa/Oportunidades and Brazil’s Bolsa Escola/Bolsa Familia. These are essentially means-tested income transfer programs, with some additional conditionality built in. Benefits are conditional on children attending school and visiting a medical center regularly. These programs are pure income transfers for those households that would have sent their children to school and to the doctor anyhow. Yet, they effectively contribute to human capital accumulation for the other families – provided, of course, that the supply of education and health services matches the

induced increase in demand. A serious evaluation of these programs has showed that they were effective in raising school enrollment rates and health outcomes in the targeted populations (Skoufias, Davis, and de la Vega 2001 on Progresa; Bourguignon, Ferreira, and Leite 2003 on Bolsa Escola; and also the general discussion in World Bank 2003).

An important point that should inspire policy makers is that redistribution tools can be effectively used to modify the distribution of physical and human capital in the economy. In view of the analytical framework developed in the preceding section, this means that possible adverse consequences of growth on the distribution of income may be corrected by redistribution at low cost, and possibly even at a negative cost. On the other hand, this redistribution is also likely to make future growth more favorable to the poorest segments of society. Interesting experiments are under way in various countries, and are being followed closely by researchers. Assessing the implications of these programs will take time and effort by the development economic research community. Existing results raise hope that the complementarity between growth and equity might be better exploited in development strategies.

Given the constraints faced by low-income countries, can efficient redistribution work in practice? Much empirical evidence supports the theoretical arguments outlined above, but more research is needed on the role of targeted transfers in developing countries in order to answer this question. Specifically, we need to deepen our understanding of targeted transfers in light of new theories on the social costs of uninsured risks, and of unmitigated inequalities.

What about asset redistribution programs? Their feasibility will be largely a function of the political context. Asset redistribution schemes have to conform with political realities. While social benefits would accompany any exogenous redistribution of wealth in slow-growing and authoritarian societies, this would clearly be opposed by the elites. Such a redistribution is thus an unrealistic option.

We have learned much about the political economy of asset redistribution in recent years. Redistribution may be necessary for growth. Fixed costs of education and liquidity constraints prevent the poor from becoming educated without transfers from the upper-income and

politically active classes. But poor people are unlikely to mobilize to demand more transfers. Political participation depends on the educational level or income of economic agents.

Mechanisms of asset redistribution are more general than they appear. The mechanisms analyzed in the context of education and political rights in the previous section are relevant in other political economy contexts, such as trade reform or land reform. The arguments are in fact valid for any economic reform or policy that increases the economic payoff of the incumbent elite, but also reduces its political power by enabling new segments of society to be politically effective and to ask for downward redistribution.

Initial conditions matter. Initial income per capita levels (initial income inequality) positively or negatively affect the likelihood that a country will achieve democratization and its average rate of growth on any given time horizon. Initial per capita income levels (initial income inequality) positively or negatively affect the speed of (full) democratization of countries that are experiencing a democratic transition.

Social stratification cannot be separated from changes in political institutions. The elite in power may favor the emergence of a middle class purely for reasons of political economy. Under some circumstances the elite group may have incentives for strategically "promoting" the creation of a restricted middle class by providing education. This allows them to reap the benefits of higher economic growth triggered by the accumulation of human capital, while at the same time mitigating the likelihood of expropriation after partial or full democratization. The process of social stratification thus cannot be separated in a historical perspective from the process of political transition.

CONCLUDING REMARKS

The simple arithmetic of poverty, inequality and growth shows that the distribution of income conditions the contribution of growth to the change in poverty. For a given level of development, the impact of growth on poverty reduction is high when the inequality is low; for a given level of inequality, the impact of growth on poverty reduction is high when the development level is high. However, the relationship between growth and distribution is two-way. The economic

growth may modify the distribution of income and welfare through various channels, which can be influenced by different policy choices; and the income and asset distribution also conditions the growth performance of an economy. No sustainable poverty reduction can be achieved without positive growth. But, to encourage growth and to strengthen poverty reduction, it is important to reduce inequality or to prevent it from increasing disproportionately.

The brief examination of poverty trends in Egypt at the beginning of this paper and the arguments documented later on do not provide adequate depth to advance specific policy recommendations, but they point towards what some of the key ingredients may be. Clearly, the important challenge facing Egypt is to improve growth performance, and with it employment opportunities for low income families. A thorough understanding of the bottlenecks and constraints to growth is essential for developing a focused growth strategy. Given the characteristics of poor households, a ‘pro-poor’ growth strategy will likely need to focus on the constraints to agricultural productivity and to the investment climate in Egypt, particularly on reducing regulatory obstacles to operating medium, small and micro businesses.

Another clear message of the previous analysis is that distributional changes have had a major impact on poverty outcomes in Egypt, and vary significantly across regions. A deeper understanding of what lies behind these changes, and the impact of public policies and public expenditures on the distribution of welfare, may help shape policies to reduce or reverse deteriorating income inequality. The extreme poverty found in rural areas of Upper Egypt points to the need for more focused efforts to target physical infrastructure needs and public service delivery to these communities.

It is the underlying distribution of assets which is the major factor driving individual and aggregate incomes. Short of physical redistribution of assets, which has historically been possible in most countries during narrow windows of opportunity, public policy clearly has a major impact on the distribution of human capital. This can be promoted through providing poor families with access to good quality basic and secondary schools, improved agricultural extension services, and other learning opportunities. Illiteracy is still a serious problem among

poor households, particularly in rural areas, and points to the need to make more classrooms available in poor areas, and for policies targeted at improving enrollment of girls, who suffer disproportionately from inadequate access to public services.

Given the changing and complex picture of poverty in Egypt, a poverty reduction strategy for Egypt will have to be comprehensive yet flexible. The poverty level in Egypt differs sharply among regions. Most of the poor live in Upper Rural Egypt, where around 4 percent of the population is within 40 LE of the poverty line,[14] and hence small changes in expenditures can cause large swings in poverty. The strategy will have to cope with this shallowness of poverty and its emerging regional dimension, providing the means for generating growth in incomes such as that in the late 1990s, protecting those who are not benefiting from growth, and continuing to invest in human capital, an important asset strongly associated with improved earnings potential.

To reduce poverty in Egypt, it is important to focus on growth, education, and safety-nets. The first key strategy is to increase the current earnings through growth. International and Egyptian experience suggests that sustained economic growth is necessary for reducing poverty. Poverty rates declined in Egypt from 19.4 percent to 16.7 percent during 1996-2000. A clear linkage between poverty reduction and growth is also found at the regional level: the two regions that grew the fastest during 1996-2000 also experienced the most rapid rates of poverty reduction (Metropolitan and Lower Egypt); by contrast, Upper Egypt, the region that grew the slowest, actually experienced an increase in poverty. Poverty in Egypt has a strong intergenerational dimension. The poor of one generation typically come from the ranks of the poor of the previous generation. Education is one of the most prominent correlates of poverty in Egypt. For example, the chances of being poor if one has a university education are much less (about 2 percent) than if one is illiterate (around 24 percent).[15] The second key strategy for poverty reduction is hence to increase the future earnings through education. Although creating the opportunities to increase the current and future earnings is the most powerful way to reduce poverty, the third key strategy is to protect the vulnerable who are unable to avail of opportunities. The public safety net system

[14] World Bank (2002).
[15] World Bank (2004).

in Egypt is extensive. However, to improve its effectiveness in mitigating poverty, it is important to strengthen the targeting. In addition, to combat poverty in a cost-effective manner, good monitoring and evaluation systems are also critical in Egypt.

ANNEX A

REGIONAL ANALYSIS OF POVERTY IN EGYPT

In Egypt, worsening distribution across households is due both to the deterioration within regions, and between regions. During 1996-2000, the main source appears to be within regions, but initial inter-regional inequality was quite high.[16] Upper Egypt is distinctly poorer than other parts of the country due to several factors such as higher dependency rates, lower literacy, dependency on agricultural incomes, and lack of access to transport and markets. The rural areas of Upper Egypt in particular are the poorest in the country, accounting for half of poor households, and with the most severe *depth* of poverty among poor households (World Bank 2002).

Table A1. Regional Comparison – Growth, Inequality Change and Poverty Reduction (1996-2000)

	Change in the Gini coefficient	Annual growth in per capita expenditures	Change in poverty incidence (headcount index)
Metropolitan	0.022	7.96	-8.04
Lower Egypt Urban	-0.028	1.04	-2.17
Lower Egypt Rural	-0.032	2.87	-9.70
Upper Egypt Urban	0.023	-1.32	8.45
Upper Egypt Rural	0.005	-0.33	4.83
Border Urban	0.054	9.73	-1.93
Border Rural	-0.082	-4.09	4.48
All Egypt	0.033	3.24	-2.68

Source: El-Laithy, Lokshin, and Banerji (2003).

Note: A negative Gini change stands for reduction in inequality; a negative change in poverty incidence stands for a reduction in poverty.

Table A1 shows three distinct regional and urban-rural patterns as reflected in changing distribution, household expenditure growth, and changing incidence of poverty from 1995 to 2000. Lower Egypt has benefited from the reinforcing combination of positive expenditure growth and improved distribution, with poverty incidence falling by more than average (by nearly 10 percentage points in rural Lower Egypt). By contrast, Upper Egypt has both contracting expenditure growth and rising inequality. This is

[16] El-Laithy, Lokshin, and Banerji (2003) show that 82 percent of inequality in 1999/2000 can be explained by within-region variation, while 18 percent can be explained by between-region variation.

causing poverty incidence to seriously worsen, rising by over 8 percentage points in the case of urban Upper Egypt. Nationally, and in the Metropolitan region, the very rapid growth of expenditures outweighed a small worsening of the distribution – even the poorest decile in Metropolitan Egypt saw its expenditures grow at 6 percent per year.[17]

Figure A1. Egypt: Urban, Rural and National Expenditure Growth Incidence Curves, 1996-2000

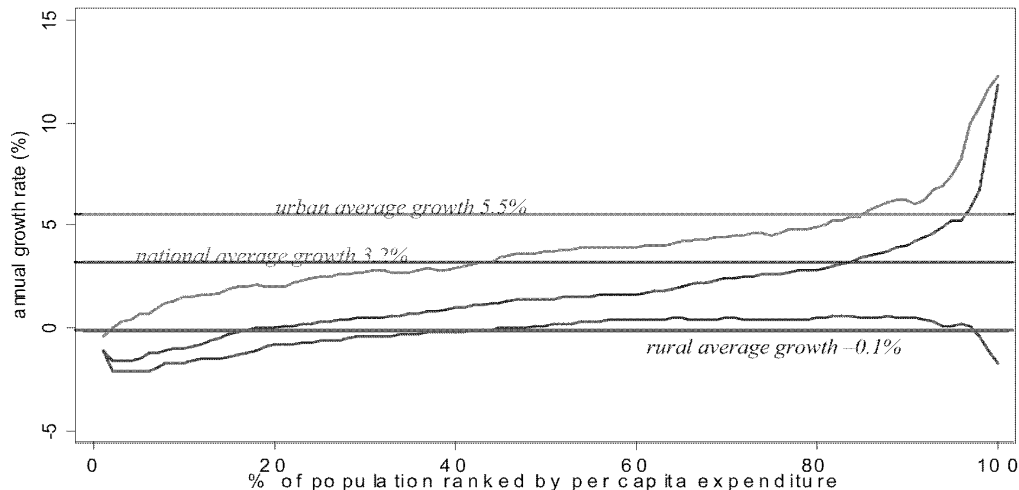


Figure A1 shows the growth incidence curves[18] between 1996 and 2000 for all of Egypt, urban and rural. While average per capita household expenditures grew by 3.2 percent annually, growth rates for poor households were consistently lower than for rich households. Eighty-five percent of households faced lower than average growth, whereas the richest 15 percent enjoyed higher annual expenditure growth. Comparing urban and rural differences shows that the shape of the growth incidence curve for urban Egypt is very similar to national trends, but enjoyed significantly higher growth across the entire distribution. By contrast, there was essentially zero household expenditure growth in rural Egypt (-0.1 percent), and the curve is flatter. The poorest 45 percent and the richest 3 percent had falling household expenditures.

[17] World Bank (2002).

[18] Here, the "growth incidence curve" is approximate, and drawn based on the percentile average per capita expenditure per year (HIECS 1995/99) at the 1995/96 metropolitan prices that Dr. Heba El-Laithy kindly offered.

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PART II: DISCUSSION

THE POVERTY-GROWTH-INEQUALITY TRIANGLE: WITH SOME REFLECTIONS ON EGYPT

Participants in the discussion that followed François Bourguignon's presentation included Karima Korayem, Professor of Economics, Al Azhar University; Gouda Abdel Khaleq, Professor of Economics, Cairo University; Omar Mohanna, Chairman, Global Protection and ECES Honorary Treasurer; Heba El Leithy, Professor of Economics, Cairo University; Antonio Vigilante, Resident Coordinator, United Nations Development Programme; Mohamed Nossair, General Manager, Global Marketing Consultancy; and Selim Al Teletly, Executive Director of the Industrial Modernization Centre. The following is a summary of the discussion.

Participant: You raised the issue of income redistribution and whether it can be achieved through the tax system. Considering that Egypt is currently discussing a new tax law, it is important to understand the extent to which this law can be used to affect the level of equality or inequality, increase economic growth, reduce poverty and improve the standards of living for the citizens of this country. Also, you mentioned the issue of subsidies, which is another form of income redistribution. In your opinion, could the tax and subsidy policies be used to achieve equality and hence reduce poverty while boosting economic growth?

You also raised the issue of distortions. It is worth noting in this respect that the proposed tax law includes eliminating tax holidays, reducing the rate of taxation on individuals and corporations and introducing a flat-rate tax to replace progressive taxation. Could you elaborate on the likely implications of these reforms?

The third point relates to your emphasis on the role of asset accumulation in improving equality. Are you saying that the ability to use assets as collateral for bank loans will create more equality? ECES and the Peruvian Institute for Liberty and Democracy conducted a large study about registering property titles as a way of empowering the poor. The study revealed that about 64 percent of real estate in this country is not registered. Do you think implementing this project would help limited-income groups accumulate assets?

Speaker: On tax and redistribution, I don't know the full effect of the tax system on distribution in Egypt. I think the reference you made to the flat tax is interesting, though. It is true that today we tend to think of the flat tax as a good system because it is easy to implement, and makes everyone pay the same rate, more or less. The value-added tax on expenditures is probably a good system from that point of view.

I don't want to say that the progressive income tax is a bad system; I simply want to make the point that we can achieve substantial redistribution by combining a flat tax and public spending – such as cash transfers to the poor and public expenditures on infrastructure. So, we should not think that redistribution can only be achieved through progressive taxes alone, but possibly through neutral taxes and expenditures. From that point of view, having a proportional tax that is the same rate for everyone would reduce distortion, while spending in various ways across different income groups would achieve a lot of progressivity.

Would a flat tax still be distortionary? The answer is yes. The problem is that all taxes are distortionary, because tax reduces the rate of return to all kinds of investments – financial, human capital, and even workers' salaries. So, we know there is distortion linked to the tax rate. If a country has a flat-rate tax of 60 percent because it wants to increase the amount it can spend to equalize disposable income or access to public infrastructure, then we know that this economy is not likely to perform well. So, yes, there are distortions. The only good tax from an economic point of view is the lump-sum tax. With this kind of tax, you are taxed purely arbitrarily, which obviously is not fair and difficult to implement. The last experience in that direction was probably Margaret Thatcher's experiment with the poll tax, which was exactly that: a lump-sum tax that was totally arbitrary.

I don't know whether we have to consider subsidies as part of the tax system or not. You can consider them a negative rather than a positive tax and that also creates distortions. The problem is slightly bigger in this case since you are modifying the system of relative prices and generating more demand for some goods, and it is not clear that it does much in terms of distribution. But I totally agree that food subsidies have a distributional impact. This is simply

based on the fact that if you look at the total spending of poor households, a higher proportion of their total expenditures is devoted to food compared to rich households. So, from that point of view you could say that food subsidies proportionally benefit more poor than rich people. But we have to keep in mind that rich people eat too. Because of that, a lot of the subsidies will be wasted on people who could afford to pay full prices. The problem with food subsidies is that while it is true that they achieve some redistribution, they are doing it in an inefficient manner, with a lot of leakage on one hand and distortion of relative prices on the other. Compared with food subsidies, cash transfers are actually a much better system, as long as it is possible to implement them and identify those who need them, and transferring cash does not produce other types of disincentives.

I think you made an excellent point about registered property. It is very difficult in economics to identify what the primary binding constraint to efficiency and growth may be; in other words the factor that, if improved, will immediately generate positive results. Registered property may be that factor. It is true that if more property were registered, more people will have collateral, which will have positive effects not only on the financial sector but also the whole economy. Unregistered property is not exactly about the redistribution of wealth; it is lowering the value of wealth. Although people have the right to use their property, in the words of Hernando De Soto, all of the "spillover" aspects linked to the value of that property – economic and social – are simply eliminated if it remains unregistered.

Participant: Concerning the impact of distribution on growth, we cannot reach conclusive statistical results as to whether inequality of wealth is pro or against growth. Can we truly separate the impact of wealth distribution from the impact of income distribution? If we distribute assets to the poor, this will benefit them and lead to better income distribution. Distributing assets to the poor means distributing income to them because the return of assets is income. The question is: can we really separate the two and reach a conclusive result?

Also, you reached a conclusion on Egypt that between 1995 and 1999 income distribution has worsened in rural Egypt but stayed the same in urban Egypt. I have developed a

methodology, which revealed that income distribution has improved in rural areas and deteriorated in the urban areas. If both of us used the same data, how come we have reached different conclusions?

Speaker: I think you are absolutely right; wealth at some stage becomes income. When we talk about physical wealth, at the end it becomes income. You could say that we're always going from income to income because we are raising taxes on income or consumption expenditures that we could possibly distribute to accumulate assets among the poor, but at the end we will be generating more income among these people. But, it turns out that there is a difference between spending the money on facilitating education among the poor and cash transfers to the poor. We know that a generous cash transfer program generates disincentives. Some people might not have the incentive to look for a decent job because they know they will be receiving this kind of transfer.

I am aware that this might not be a big problem in Egypt, but I come from a region of the world where there is some concern about this. Europe has a very generous cash transfer system, but we know that the system has some inefficiency, particularly in generating much more long-run unemployment than would be the case without the system. Not only are we modifying the rate of return to labor and capital through the tax system to raise the money to pay for income transfers or investments in the human capital of the poor, but also we have a disincentive originating from the fact that we are modifying the return structure for the people receiving cash transfers.

I must also admit that it is very difficult to imagine a wealth accumulation program oriented toward the poor without a strong income component. Building schools is simply not enough. It's not that people don't send their kids to school because there are no schools around. Very often they don't send their kids to school simply because they need them at home, on the farm or for some other activity. The only way we can incentivize these people to send their kids to school is probably through cash transfers. There are very interesting programs in several countries, particularly in Latin America, where poor families are receiving cash transfers on condition that

they send their kids to school. The transfer also depends on whether the child is a girl or a boy in order to ensure there is no gender discrimination. Programs like Progresa/ Opportunidades in Mexico and Bolsa Familia in Brazil have been very successful in reducing poverty and as an incentive for people to accumulate human capital.

In summary, it is difficult to distinguish between wealth and income, but analytically it is an essential distinction and empirically and politically we have to see how we can adapt this distinction to get the best out of it.

To answer your second question, I do not think that there can be any difference in conclusions if we are using distribution data on Egypt in those two years. One possibility is that there are differences in methodology or interpretation of the data. I know that two income inequality measures may not always give the same results, but in this case the evolution should be the same. Based on the HIES data, our studies found that the income distribution in urban Egypt worsened during the period of 1995/96-1999/2000, while that in rural Egypt stayed almost unchanged. I will be happy to read your paper "Pro-poor Policies in Egypt."

Participant: I agree with your point that running cross-section and cross-country regressions to prove hypotheses doesn't take us very far. I'm inclined to go in the direction of microeconomic studies. What is the data implication of that direction and what does it mean for countries where data collection efforts are lacking in many ways? For instance, I'm doing research on the relationship between growth, poverty and inequality in Sudan, but there has not been a household budget survey since 1973.

Regarding policies, it is interesting that if you take it both ways – from growth to distribution or the other way around – there is no systematic relationship in cross-country data. How does this important result affect the package of policies that has been promoted by the World Bank under the structural adjustment package? It seems to me that it is all policy and institutionally-dependant. I noticed that the World Bank and the International Monetary Fund are now going in

the direction of a poverty-reduction strategy to deal with the fallout of trying to push for growth. So, I would like to know your views on this point.

I agree with your point about the importance of wealth distribution, but I have a question about the problem with inefficiency in income-to-income distribution. Do we have to insist on defining efficiency in isolation of an equity component? Could we try to factor in some notion of equity in order to reach a definition of efficiency, rather than simply dismissing policy measures as being inefficient?

In Egypt, we are debating whether the current subsidy policy is efficient and the idea of cash transfers is being seriously considered. The data requirements of this, in our case, are tremendous because while you can make a headcount of the poor and argue with the margin of error, the real question is identifying the poor and reaching them. So, from a political point of view, should we insist on actually doing away with the current system on the basis that it is inefficient? What would be the socio-political implications if we fail to introduce an alternative subsidy system?

Speaker: I totally agree with you about the need for more microeconomic data. You cited the case of Sudan, but I know countries where there has never been a household survey and we're trying to measure the evolution of poverty, so it is a big problem. This simply means that efforts must be made everywhere to ensure these kinds of data are gathered in a consistent way that permits comparison over time.

On the view of the Bank and whether what I presented today represents a departure with respect to the structural adjustment period of the Bank, I am tempted to say to some extent that yes, there is a departure. But I'm not sure that it is a big departure. There are two fundamental determinants to poverty, growth on one hand and distribution on the other. Development economics has been moving in an evolutionary cycle between those two views. If we go back to the end of the 1960s and beginning of the 1970s, distribution had become the eminent view. Then in the 1980s and early 1990s when we had the structural adjustment period, growth became

most important. I think that often in these kinds of situations people take time to recognize that the reality they are facing is a combination of different, sometimes opposing views.

During the structural adjustment period, there were two issues of concern. First, will structurally-adjusting an economy make it grow faster? I'm not sure that we gave the proof that the kind of adjustment that was made was sufficient to trigger growth. Second, what would be the impact of those reforms on distribution? We know that those reforms have been regressive to a large extent in some cases. This is well documented by the Fund and the Bank. So, I would say that today we are in a stage at which we are drawing the lessons from all of this and we are now considering both growth and distribution at the same time and we are fully examining the relationship that may exist between them for poverty reduction. I would say this is very much the motivation behind today’s poverty reduction strategies. In particular, I think it would be totally erroneous to consider that the poverty reduction strategies are a kind of follow-up to the structural adjustment loan. It is a totally different view. Today, we're asking countries to establish a strategy for poverty reduction and then, given that strategy, the Bank and all donors are simply trying to see where they can help. This is rather than doing the opposite of the “old” way when we were saying “we want to help you” and “this is what you should do.”

On the issues of efficiency and equity, the plan is to know whether this efficiency/equity opposition, which is central to a good part of economic theory, makes sense or not. We have to be clear on the definition of efficiency and equity. For example, by saying that efficiency is about total production, without any regard to the way it is distributed, and that equity is the way in which one given amount is distributed in a population. I think the distinction between efficiency and equity is still valid, but what maybe less valid is the way we used to think of it as a tradeoff. We used to say if you want to have more efficiency and more growth then you have to give up on the equity side. I hope what I've shown today makes it clear that the way we should think about these things in the Bank and elsewhere is exactly the opposite. What we are looking for are “complementarities” between equity and efficiency. The argument about an imperfect capital market is that there is a way we can be more equitable, in the sense that we are fostering

more accumulation among poor people, while being more efficient at the same time, since the total size of the pie will increase over time.

You are right that many requirements are necessary to move to a cash transfer system. But I'm really struck by the experience in Latin America. In Mexico, 10 or 15 years ago no one would have believed it was possible to install a cash transfer system without a lot of corruption. This system is now working remarkably well, and now we're observing similar systems in Colombia, Chile, Brazil and Ecuador. So, there are many countries that are moving in that direction and while they may not find it easy to implement, they implement it nonetheless, and in some cases with very modern technology. In Chile and Columbia, they're using smart cards that are given based on some permanent characteristics of the people and then for a year or two they have the right to get certain benefits and transfers. I know that this is an important issue here in Egypt and I would urge you to look at this relevant experience.

Participant: You cited the example of democracy in Latin America with respect to mechanisms linking growth and distribution, and the endogeneity of redistribution policies and the social institutions determining them. Could you elaborate on this point?

Speaker: We tend to think of institutions as totally exogenous to the development process or to the functioning of an economic system, but institutions are as endogenous as many other elements in society. For example, if we talk about democracy, it is not clear whether you can impose democracy on society. You need to have an evolution that will allow such a system to settle. This evolution may not be very peaceful, but in some cases it may be very progressive, and we know that it will not take place automatically in all countries. Today there are countries where it is easier to move to democratic public decision-making. In others, there are factors that are disrupting the evolution and those factors are often related to distribution.

Some time ago, I wrote a paper where the oligarchy was responsible for making changes that would eventually modify political institutions. One mechanism was through the oligarchy deciding to invest in the education of the poor. By doing so, they'll make the poor much more

politically active, and then they will not be able to block the move toward democracy and thus lose political control. At the same time it may be advantageous to them to have better educated people and more skilled labor because they will generate more returns on their capital with more skilled labor. If the benefit compensates the cost of losing political control, the elite will go for education and democracy. If not, they are likely to block the evolution. This is a simple story, but I believe it is very important in this respect.

Participant: I would like to make some comments about the case of Egypt as I was involved in preparing the poverty assessment report for the World Bank. We found that there is a distinction not only between urban and rural Egypt, but also between metropolitan Egypt, Lower Egypt and Upper Egypt. When we estimated the elasticities of growth, we found that in Upper Egypt the elasticity of growth is very low compared to Lower Egypt and the metropolitan regions. I think it's not simply a matter of growth versus redistribution broadly. If we assume that there is 3 percent growth in income then the impact on poverty for Lower Egypt will be greater than that for Upper Egypt. I think we should also look at equity between regions because the initial conditions of Upper and Lower Egypt are different. It is well-known that Upper Egypt lags behind, for example in infrastructure. So, I think if we are looking to make an improvement there, it is important to make the region more responsive to growth.

Speaker: I agree with your statement that 3 percent growth in Upper and Lower Egypt will produce different poverty results in the two regions. We know perfectly well why and if we know the distribution data we can conduct a fully precise calculation. The fact that there is lower elasticity is essentially due to the fact that one region is lagging behind. If the poverty line is the same, it will be sufficient to explain why the elasticity is much lower. Why is the rate of growth different in the two regions? You can say that the initial conditions certainly play a role. But at the last stage of the analysis, when you look at the elasticities, there is no ambiguity except for perhaps some questions regarding the data that was used.

Participant: I'm intrigued by your reference to the lump-sum subsidy. It is an option we have been thinking about in terms of distribution of income in cash. You also made a reference to smart transfers. Could you give us a few examples?

Speaker: You could say that cash transfers in flat amounts are something like a lump-sum subsidy, because it is not based on the income of recipients. However, the fact that it is given only to "poor" people means that it is implicitly based on income. You can say that this is not the same thing as a subsidy, which is more or less proportional to income, and it doesn't have the same properties. That is true, but in a very rough way. Cash transfers which are given to the poorest segment of society cannot be considered lump sum. They depend on what people do and achieve.

Regarding smart transfers, the way in which the Mexicans started with this is very simple. They identified some household characteristics that they believed are good indicators of the permanent income of those households such as size of the household, educational level, age, and type of housing. Accordingly, they were able to establish a score and depending on the level of the score, a household can either qualify for the transfer program or it does not. If it does, transfers are then received conditionally, in particular, on sending their children to school and undergoing some medical tests every year. This is very close to what we would call a standard cash transfer targeted to the poor with the additional conditionality on schooling.

There is only one difference in relation to other programs. The Mexican program is based on a kind of permanent income concept and not on current income concept. This has several implications and is also linked to the previous remark about data problems. You can see clearly how to get into the program, but because it is based on permanent factors, it is not clear how you get out. All of this is still too new for those implementing the program to have much experience in devising a plan for graduating from it. Also, this should not be confused with source of insurance. If you have a household that has a drop in income for whatever reason, it will take a long time before the household will be able to qualify for the program. Instead, what you really want is something that will be rather quick in providing income support.

These programs are certainly not the same as income support in developed countries, where you can rather easily observe the current income of the people, but I believe it is a step toward that. Everything is really dependent on the observability of income. The case of Chile is a fantastic example. They are more or less able to follow individual consumption expenditures by households based on the fact that you cannot buy anything for more than $50 without paying the value-added tax. When you pay the tax, you have to give your customer identification number and this information is sent back to the statistical office which means they are able to follow the consumption of the people, assuming that people frequently spend more than $50 at a time. This kind of technology will be more frequently available and I think there are innovations to be made in that respect.

Participant: I think there are two aspects related to this issue: one is cultural and the other is legal. I don't believe in redistribution in Egypt. Poor people are so because they lack motivation. Maybe we could use income redistribution for a while, but then people should depend on themselves. I also don't believe that real estate registration will solve the problem. All of those buildings are very old and run-down, so the collateral will not bring in much money. What I believe is that people who have ideas should have better access to finance; where they can go to banks and get loans without collateral in order to implement their ideas. We have to be more open to giving loans through banks rather than trying to help them through redistribution.

Speaker: This is a very good illustration of what I've said. You said it is better to try to favor asset accumulation among the poor rather than to subsidize them. You've pointed out the inefficiency of income cash transfers if you believe that people will work less because of them. If it were possible to guarantee equal access to the credit market for everyone, many of these issues would not arise. It is not possible to do things as simply as you've just mentioned, but it is possible that cash transfers are necessary until we find a better solution.

Participant: I would like to discuss a specific issue related to growth, distribution and democracy. There is literature that indicates that there is no strong evidence that democracy improves the distribution process or decreases inequality, particularly in developing countries. What is your opinion about this?

Speaker: I'm not very surprised by such findings. There is considerable literature on the relationship between democracy and growth and about the direction it takes. Which countries are more likely to become democratic or is it the case that democracy is helping growth? There is no answer from that point of view. We've observed that there is a correlation between democracy and growth, but we cannot say at this stage that it is because a country is becoming democratic that the growth process will be accelerated.

I think that the same goes for distribution. There are many determinants of distribution, and if you simply look at the Gini coefficient of democratic countries and compare that to countries that are not, then maybe what you are picking up are differences that are totally unrelated to democracy. Notwithstanding the fact that defining democracy is not something that is easy to do. Simply because you need a majority vote to elect a president or parliament does not mean that you are in a democratic country. You also have to look at the implicit weight of the various votes in a country. Many people think it is a good approximation to say that the weight of your vote depends on your wealth. Of course, there is no country in which the number of votes corresponds to wealth. But practically, through the impact wealthy individuals may have on leaders of political parties, we know that rich and educated people have more impact on the decisions being made through a voting system than people with limited wealth or education. So these are things that should be taken into account.

I believe we should look at the difference in terms of redistribution, not so much in terms of distribution. In democracies, more is being done to modify the distribution of income in comparison to what the market generates. We would like to analyze this issue in more detail, but it is difficult because among developing countries redistribution is not a big part of public

spending. Therefore, it is rather difficult to identify the exact amount of redistribution that is taking place in various countries and to make international comparisons.

Moderator: Thank you Mr. Bourguignon for a very enriching presentation and discussion on very timely and relevant issues for Egypt. I would also like to thank the participants for joining us and for their insightful questions and commentary.

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